IN THE UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MISSOURI
CENTRAL DIVISION

MISSOURI COALITION FOR THE ENVIRONMENT, PLAINTIFF, v. ANDREW R. WHEELER, Administrator, DEFENDANT.	)	Case No. 2:19-cv-04215-NKL

PLAINTIFF'S SUGGESTIONS IN SUPPORT
OF ITS MOTION FOR SUMMARY JUDGMENT

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AQL ..... Missouri's protection of aquatic life use
AR ..... Administrative Record
CWA ..... Clean Water Act
DWS ..... Missouri's drinking water supply use
EPA ..... United States Environmental Protection Agency
MCE ..... Missouri Coalition for the Environment
MDC ..... Missouri Department of Conservation
MDNR ..... Missouri Department of Natural Resources
MSD ..... Metropolitan St. Louis Sewer District
RIR ..... Regulatory Impact Report
TN ..... Total Nitrogen
TP ..... Total Phosphorus
WQS ..... Water Quality Standards

Plaintiff Missouri Coalition for the Environment (MCE) files these suggestions in support of its Motion for Summary Judgment.

STATEMENT OF FACTS[1]

Background

1. Under the Clean Water Act, water quality is protected by three interlocking standards. First, each waterbody is categorized by how it is used—swimming, boating, fishing, drinking water supply and so on. The uses are protected by water quality criteria which specify the amount of a pollutant that can be in a waterbody and still allow it to be safely used as categorized. Criteria come in two types: (1) narrative criteria which describe undesirable colors and smells in a waterbody that would make it unsafe to use and (2) numeric criteria which provide a numeric limit above which it is not safe to use. Second, anti-degradation rules preserve existing water quality by placing limits on the discharge from new or expanded sources. 40 C.F.R. Part 131, Subpart B.

2. EPA has recognized that the excessive levels of nitrogen and phosphorus -- nutrient pollution – in the waters of the U.S. cause degradation of water quality through the excessive growth of algae, cause health problems in people and pets, and lead to large hypoxic areas in which aquatic life cannot survive. Since at least the late 1990s, EPA has encouraged states to develop numeric nutrients criteria to protect their waters and has offered methodological and technical guidance to assist them in the process, pledging to enact numeric nutrient criteria itself if states were unable to do so. [2]

EPA disapproves Missouri Criteria

[1] Document citations are to Administrative Record page numbers. Copies of cited record documents are submitted as an Appendix.

[2] EPA summarizes the background and history of nutrient pollution in its December 15, 2017 nutrients standards proposal. Exhibit 21, AR 002-004.

3. In 2009, Missouri promulgated numeric nutrients criteria for lakes and submitted them to EPA for approval. 33 U.S.C. § 1313(c). At the time Missouri already had narrative criteria that could provide some protection when a water was so badly impaired that it was had an unsightly color, offensive odor, or contained scum and floating debris. 10 CSR 20-7.031(4).

4. On August 16, 2011, EPA disapproved these criteria as they applied to most of the lakes in Missouri. Exhibit 1, AR 2977. EPA wrote:

> The approach used to derive the criteria … is not based on a sound scientific rationale because it does not include the data and other necessary information to allow others to independently reproduce the work.
> …
> In addition, numeric nutrient criteria … as described in the Rationale … fail to demonstrate that the values or approaches to numeric nutrient criteria will protect the designated aquatic life or recreation uses.

Exhibit 1, AR 3006-07.

5. Under the Clean Water Act, when EPA disapproves water quality criteria that a state has submitted for review, it must "specify the changes to meet such requirements." 33 U.S.C. § 1313(c). EPA indicated that

> "[a]t a minimum, it is important that the revised criteria also take into account the following:
> • When using a reference approach or least-disturbed approach, reference waterbodies should not be impaired by anthropogenic nutrient pollution and the selection process for reference waters should not exclude high quality lakes based solely on a particular landcover class, especially where other landcover classes may be more representative of minimal human disturbance.
> • If using a modeling approach to develop TP, the approach must result in criteria that are supportive of the designated use. Accordingly such an approach should use data from waters that support the use such as reference/least-disturbed lakes (or alternatively a lower percentile i.e., <25th percentile of the full population), the number of lakes (n) for each ecoregion should be sufficient to establish a robust relationship, and the resulting relationship should be shown to predict lake TP concentrations with sufficient accuracy to inform criteria derivation. If these conditions are not met, the approach may not be scientifically defensible.
> • Chlorophyll and TN concentrations in reference/least-disturbed lakes should be evaluated to inform criteria derivation. Statistical relationships between TP and Chlorophyll, TP and TN, and TN and Chlorophyll can also be estimated and used to translate chlorophyll criteria to corresponding TN and TP criteria. These multiple lines of evidence can then be used to develop a more robust and scientific rationale, rather than relying on a single relationship.

Exhibit 1, AR 3007. The methods described above – least disturbed, reference, modeling – refer to the methods from EPA guidance for states to use when developing numeric nutrients criteria. Exhibit 2, AR 7318-19 (describing methods).

6. Over the next four years, Missouri floated draft criteria, but did not take steps to formalize them. For example, in 2014, MDNR considered numeric nutrients criteria for nitrogen (as total nitrogen or TN), phosphorus (total phosphorus or TP) and for chlorophyll-a (chl-a, a reactive parameter which is the product of nutrient pollution, rather than its cause.[3] Standards were proposed to protect the Drinking Water Supply use (DWS), the Whole Body Contact-A use (recreation), and the Protection of Aquatic Life use (AQL). Exhibit 3 at page 17.

7. The CWA places the initial responsibility for developing revised nutrient criteria on Missouri. 33 U.S.C. § 1313(c). After 90 days, that responsibility transfers to EPA. 33 U.S.C. § 1313 (c)(4). By 2014, EPA was under a nondiscretionary duty to promulgate numeric nutrient criteria for Missouri lakes and vulnerable to a citizen suit under the CWA.

Missouri proposes new replacement nutrients criteria

8. In the fall of 2015, as MCE was preparing its Notice of Intent to Sue,[4] DNR proposed a new draft version of lake nutrient criteria and rationale supporting the new proposal. Exhibit 4, AR 3069-70. The proposed criteria would protect only the DWS and AQL uses, but not recreation. *Id.*

[3] The CWA defines "pollutants" as substances discharged into a navigable water and defines "discharge" as the addition of a pollutant to a water of the U.S. 33 U.S.C. § 1362(6), (12). Chl-a is not added to water, but forms in the water as levels of TP and TN increase.

[4] The Notice was sent on November 6, 2015. Plaintiffs alleging a breach of a nondiscretionary duty under the CWA must give notice to EPA 60 days before filing suit. 33 U.S.C. § 1365.

9. Unlike the earlier version of the regulations, the September 2015 draft included a numeric criterion only for chl-a and not for nitrogen and phosphorus, the pollutants themselves. Exhibit 4, AR 3070.

10. TN and TP figures were included in the proposal, but as screening values instead of as criteria. Exhibit 4, AR 3079. The difference is important. When the concentration of a pollutant in a waterbody exceeds the numeric criteria, the water is deemed impaired and the provisions of CWA § 303 come into play, eventually leading to restrictions on the amount of the pollutant that can be discharged into the water.

11. When the concentration of a pollutant exceeds the screening value, the water is not considered to be impaired, but is placed in a gray zone, which would lead to further inquiry about impairment. Exhibit 4, AR 3071, 3081. The further inquiry – called the "weight of evidence evaluation" – would require MDNR to look for additional indications that nutrient pollution has occurred. *Id.* at AR 3081. In the 2015 proposal, the weight of evidence factors developed in connection with the AQL use included "fish mortality or morbidity events" and "excessive levels of mineral turbidity." Exhibit 5 at page 2

12. MDNR was very concerned that any numeric criteria it developed avoid what it called false negatives – situations where TN and TP are high, but no algae are visible. Exhibit 4, AR 3080-81. MDNR also wanted to focus on restoring impaired lakes. *Id.* at AR 3080. Finally, MDNR wanted to protect the kinds of fish that anglers like to catch in Missouri lakes even though those fish could tolerate higher levels of nutrients than other forms of aquatic life, which flourish in less nutrient-heavy waters. *Id.*, AR 3076.

13. In developing these criteria, MDNR did not use the methods recommended by EPA in the disapproval. Instead, it relied on a discussion from an April 13, 2013 EPA-sponsored workshop on preparing nutrients criteria for streams. Exhibit 4, AR 3072.[5]

EPA does not believe MDNR's proposal is approvable

14. EPA Region 7 staff were skeptical of the new proposal, and on May 12, 2016, EPA informed DNR that it could not approve the standards as written. Exhibit 6, AR 4778-79.

15. Most importantly, EPA indicated that the screening value approach and the use of only chl-a as a numeric criterion would "focus on the identification of waters already requiring restoration and would do little to protect designated uses." *Id.* at AR 4778.

16. Moreover, the "weight of evidence" factors were qualitative rather than quantitative and would apparently offer "no protection beyond that provided under the general narrative criteria." *Id.* Missouri had previously acknowledged that "harmful algal bloom" and "fish kill" were not quantitative measures. *Id.*

17. EPA went on to note that the "statistical variability" attributed to Missouri's reservoirs could be handled without eliminating TN and TP as criteria and that many other states had done so. *Id.* at AR 4778-79. EPA suggested that MDNR's "desire to encourage the growth of certain sports fish at the expense of other aquatic organisms" was not a valid concern under the CWA. *Id.* at AR 4779.

Deadlines from the Consent Decree

18. Meanwhile, MCE had filed suit on February 24, 2016. EPA and MCE discussed settlement in July 2016 and eventually agreed to the terms of the Consent Decree that settled the

[5] US Environmental Protection Agency. (2014). US EPA Expert Workshop: Nutrient Enrichment Indicators in Streams: Proceedings April 16 - 18, 2013., (September 2014). Available at https://www.epa.gov/sites /production/files/2013-09/documents/indicatorsworkshop.pdf. This document is not part of the administrative record, but the reference to its use is at Exhibit 4, AR 3072 and 3084.

case. Exhibit 7, AR 14847.

19. The Consent Decree required EPA to promulgate draft numeric nutrients criteria for Missouri lakes by December 15, 2017 and final numeric criteria by December 15, 2018, unless it approved numeric criteria promulgated by Missouri before either date. *Id.*

Post-election events

20. On November 4, 2016, President Donald Trump and Missouri Governor Eric Greitens were elected. Later that month, although MDNR circulated another version of its 2015 nutrients proposal and rationale, Exhibit 8, AR 10523-24, it did not take any further steps towards the official start of rulemaking, despite the December 15, 2017 Consent Decree deadline.[6] EPA continued to review and discuss the new standards in the spring of 2017. Exhibit 9, AR 12240.[7]

21. In July 2017, MDNR released another version of the lake nutrients standards which substantially resembled the 2015 and 2016 versions. *See* Exhibit 10 at pdf 10-11, The 2017 proposal kept the screening values/ weight of evidence factors approach, continued to rely on sport fish data, and purported to protect both the AQL and DWS uses. *Id.* However, this time, DNR also issued a Regulatory Impact Report for public comment, the first step toward official rulemaking. R.S. Mo. § 640.015.[8] Exhibit 10.

22. In July, the new Director of MDNR's Department of Environmental Quality had expressed alarm that EPA appeared to be going ahead with its own criteria proposal and sought reassurance that it was not. Exhibit 14, AR 4838. Soon after, MDNR began a series of emails

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[6] In September 2017, shortly after EPA changed its mind about the Missouri standards, MCE sent a FOIA request to R7. Although the documents were given Bates numbers in the FOIA request response, the documents can now be found in the Administrative Record at AR 9047 through 15674.

[7] EPA redacted its redacted its internal responses in response to the FOIA request, citing the deliberative process privilege and attorney-client privilege, and did not include them in the Administrative Record.

[8] On September 25, 2017, MDNR eliminated its draft standards for the DWS use and republished a revised RIR. This latter document replaced the July 24, 2017 RIR. See Exhibit 19, AR 1049...

and phone calls attempting to determine whether EPA would approve its July 2017 standards. Exhibit 13 AR 9846-47.[9]

EPA circulates its own proposal

23. Around this same time, EPA was also undertaking the initial steps to promulgate draft nutrients criteria so that it could meet the December 15, 2017 Consent Decree deadline. EPA's draft Notice of Proposed Rulemaking contained criteria (not screening values) for TN, TP, and chl-a, developed using the methods EPA had suggested in 2011 that MDNR use to develop criteria. Exhibit 147, AR 1243. EPA's proposed criteria for chl-a were stricter than MDNR's 2017 screening values for the same parameter.

	Plains	Ozarks Border[10]	Ozarks
MDNR chl-a screening values (AQL) (July 2017)	18	13	6
EPA chl-a draft criterion (August 2017)	7.1	---	9.8

24. They were also significantly lower than MDNR's 2017 chl-a criterion.

	Plains	Ozarks Border	Ozarks
MDNR chl-a criterion (AQL) (July 2017)	30	22	15
EPA chl-a draft criterion (August 2017)	7.1	---	9.8

25. EPA was also able to develop criteria for DWS and WBC but found that the strict criteria it developed for AQL would also protect those uses. Exhibit 47, AR 1245. In accordance

[9] The email from Jeffrey Robichaud of EPA Region 7 to EPA Headquarters appears to be an account of some of those discussions. Exhibit 13, AR 3137-78.

[10] EPA proposed criteria for two ecoregions instead of MDNR's three. EPA's Ozarks criterion is higher than MDNR's screening value because they combine Ozarks with the Ozarks Border. Because EPA's figures were criteria, not a combination of screening values/weight of evidence factors, they are still stricter than MDNR's.

with its procedures, EPA's draft was submitted to the Office of Information and Regulatory Affairs (OIRA), part of the Office of Management and Budget at the White House. Exhibit 15, AR 1868.

EPA changes its mind

26. On August 24, 2017, many employees of Region 7 ended their employment with the agency, including 6 employees from the water division, including the two Region 7 employees most engaged in the nutrients standard review process up to that point. Exhibit 17, AR 9876. And, by the end of August 2017, it appeared that EPA and MDNR were on the same page and that MDNR had secured EPA's withdrawal, at least internally, of its May 12, 2016 letter deeming the rules not approvable. Exhibit 16, AR 3141. This shift in opinion happened without MDNR providing a new rationale for its previously rejected rule and before it supplied any additional evidence. Exhibit 17, AR 3135.

27. Apparently secure in EPA's approval of this aspect of its proposal, MDNR withdrew its proposed DWS standards and began the administrative process anew, issuing a new RIR and draft proposal. Exhibit 18, AR 4780; Exhibit 19, AR 1049-1191. As a result, MDNR's draft nutrients standards were finalized by the Clean Water Commission on January 4, 2018 after the Consent Decree deadline. Exhibit 2-, AR 9046.

28. Later events bore out that EPA had changed its mind in August 2017. In November 2017, OIRA suggested to EPA that its proposal "mirror" MDNR's October 2017 proposal. Exhibit 15, AR 1868. EPA had already reached the conclusion that MDNR's criteria were approvable and did not want to cause any awkwardness by issuing its own draft criteria from August which differed from Missouri's in many respects.

29. EPA followed through when it issued its draft nutrients standards on December 15, 2017. Exhibit 21, AR 001. EPA proposed Alternative 1, which consisted of its August 2017 numeric criteria, with TN and TP criteria changed to screening values and used with weight of evidence factors that did indeed "mirror" the MDNR proposal. Exhibit 21, AR 009, Table 3. The Technical Support Document (TSD) stops short of this approach, stating that the numeric limits proposed could be stand-alone criteria or combined criteria of a more traditional sort. Exhibit 22, AR 1908-09. The TSD also does not provide much in the way of technical support for the screening value/weight of evidence aspect of Alternative 1, mentioning combined criteria only in passing and not discussing the weight of evidence factors at all. *Id.*

30. For Alternative 2, EPA proposed standards that were "essentially identical" to MDNR's October 2017 proposal. Exhibit 21, AR 12. EPA did not prepare a Technical Support Document for Alternative 2, choosing to rely on MDNR's own documentation. *Id.*, AR 13. EPA never finalized these nutrients standards.

MDNR finalizes its nutrients criteria

31. EPA never finalized these standards. On April 13, 2018, Missouri sent its now-finalized standards to EPA Region 7 for review. Exhibit 23, AR 3145-48. The final version of Missouri's nutrients standards contains the following provisions to support the AQL use:

- A numeric nutrient criterion (now called a Response Impairment Threshold) for chl-a. A lake may exceed this value in one out of three years without being considered impaired.

	Plains	Ozark Border	Ozarks
Chl-a Response Impairment Threshold	30	22	15

- Screening values (now called Nutrient Screening Endpoints) for TN, TP and chl-a;

	Plains	Ozark Border	Ozarks
TP Nutrient Screening Threshold	49	40	16
TN Nutrient Screening Threshold	843	733	401

Chl-a Nutrient Screening Threshold	18	13	6

- Weight of evidence factors (now called Response Impairment Endpoints)

1. Occurrence of eutrophication-related mortality or morbidity events for fish and other aquatic organisms;
2. Epilimnetic excursions from dissolved oxygen or pH criteria;
3. Cyanobacteria counts in excess of one hundred thousand (100,000) cells per milliliter (cells/mL);
4. Observed shifts in aquatic diversity attributed to eutrophication;
5. Excessive levels of mineral turbidity that consistently limit algal productivity during the period May 1 – September 30.

Exhibit 24, AR 3569-71, 3390

32. A lake is impaired for nutrients if the concentration of chl-a exceeds the Response Impairment Threshold. A lake is also impaired for nutrients if it exceeds one of the three Nutrient Screening Thresholds and if it also experiences one of the Response Impairment Endpoints in the same year. But if a lake exceeded one, two or even all three Nutrient Screening Thresholds, it would not be impaired. *Id.* at AR 3571.

EPA, MDNR and members of the regulated community attempt to fill the gaps in Missouri's standards

33. In June 2018, as EPA began its review, it asked MDNR to shore up the scientific basis for its water quality standards, in particular its use of sport fish to derive criteria and screening values. Exhibit 25, AR 2364. EPA turned to a member of the regulated community, Metropolitan St. Louis Sewer District (MSD), to provide this support.

34. For example, EPA employee Anna Wildeman reached out to Jay Hoskins of MSD before her meeting with the Administrator, asking him to provide scientific support for the "apex predator" (sport fish) issue. Exhibit 26, AR 2619. MSD did so, providing EPA a memo and

copies of the articles cited in the memo. Exhibit 27.[11] He also suggested where EPA might find additional support for one of the Response Assessment Endpoints, fish kills. Exhibit 28, AR 2621.

35. MDNR sent the same documents to EPA and was also working on an Implementation Plan. Exhibit 32, AR 2624.[12]

36. The Implementation Plan is dated July 27, 2018. Exhibit 28, AR 4709. It did not go through Missouri's administrative rulemaking procedures. *Id.*

37. On December 14, 2018, the day before the Consent Decree deadline, EPA approved Missouri's standards, relying on the implementation document and the additional documents provided by MSD and MDNR over the summer. Exhibit 29, AR 4016.

MCE's Standing

38. MCE has standing to bring this action as it is a statewide environmental organization whose members are concerned about the impact of nutrient build-up in Missouri lakes and have a diminished ability to engage in and enjoy recreational activities on Missouri lakes due to nutrient accumulation.

39. MCE Member Steve Brewer of St. Louis County, Missouri uses several Missouri lakes for pleasure boating, kayaking, canoeing, and fishing, and is concerned about nutrient pollution. Exhibit B, Declaration of Steven Brewer, ¶¶ 1-5. Mr. Brewer has used and continues to use Lake of the Ozarks and Creve Coeur Lake for recreational purposes but no longer uses either lake for activities that require bodily contact, such as water skiing and swimming, due to poor water quality. *Id.* ¶¶ 6-10.

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[11] The articles and other scientific support can be found at AR 2639-2976, but are not included in the Appendix.

[12] Mr. Hoskins also noted that MDNR was preparing an Implementation Plan, that the draft he had seen was inadequate, but that "we're on it." Exhibit 27, AR 2624.

40. Joe Pitts of Christian County, Missouri is an MCE member who uses several Missouri lakes for activities such as kayaking and fishing. He is concerned about nutrient pollution. Exhibit C, Declaration of Joe Pitts, ¶¶ 1-5. Mr. Pitts has used Lake Springfield since 1965 and has observed the deterioration of water quality in the lake over the years. *Id.* ¶ 6. Mr. Pitts can no longer eat fish from the lake or kayak on the lake during the middle of the summer because of nutrient pollution. *Id.* ¶¶ 7-8.

41. Vincent Colletti of Franklin County, Missouri is an MCE member who owns property abutting Peaceful Valley Lake and is concerned about changes in the lake's water quality. Exhibit D, Declaration of Vincent Colletti, ¶¶ 1-7. Mr. Colletti has observed a significant increase in algae growth in Peaceful Valley Lake and can no longer use parts of the lake for fishing, swimming, and boating due to nutrient accumulation. *Id.* ¶¶ 8-9.

STANDARD OF REVIEW

In an APA case, summary judgment is the "mechanism for deciding whether, as a matter of law, an agency action is supported by the administrative record and is otherwise consistent with the APA standard of review." *Epp v. NRCS*, 425 F. Supp. 3d 1142, 1149 (D. Neb. 2019). Agency action must be set aside if it is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2). Agency action is arbitrary and capricious where the agency has "relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). Also, an agency action may be set aside as arbitrary and capricious if the agency fails to "comply with

its own regulations." *Nat'l Envtl. Dev. Assoc.'s Clean Air Project v. E.P.A.*, 752 F.3d 999, 1009 (D.C. Cir. 2014).

When approving a state's WQS, EPA's regulations require it to determine (1) whether the state has adopted uses consistent with the CWA, (2) whether the state adopted criteria to protect the use, (3) whether the state has followed its own legal procedures for revising or adopting standards, (4) whether state standards other than fishable/swimmable uses are based upon appropriate technical and scientific data; and (5) whether the state submission contains the elements set forth in 131.6. 40 C.F.R. § 131.5, 131.6. The criteria must "contain sufficient parameters … to protect the designated use" and be "based on sound scientific rationale." 40 CFR § 131.11(a). When a waterbody has multiple uses, the numeric criteria must protect "the most sensitive use." *Id.*

ARGUMENT[13]

I. THE EPA-APPROVED MISSOURI WATER QUALITY STANDARDS DO NOT PROTECT THE MOST SENSITIVE USE.

Although Missouri chose to protect only the aquatic life use in its lakes, the waterbodies covered by Missouri's rule also have recreational uses. 10 CSR 20-7.031. Further, approximately 120 lakes are used as a source of drinking water, the vast majority (103) of which are in the Plains ecoregion. Exhibit 4, AR 3067. Under 40 C.F.R. § 131.11(a), when there are multiple uses, Missouri must protect the most sensitive use of those waters when adopting numeric criteria. It did not.

"Sensitive" is not defined in the regulations, but has been interpreted to mean the use that would require the most stringent numeric limitations: "if a criterion is sufficient to protect one use (aquatic life) but not another (recreation), the latter is the more-sensitive use." *Florida Wildlife Federation Inc. v.*

[13] MCE is a statewide environmental organization representing members harmed by nutrient build-up in Missouri lakes and has associational standing. *Hunt v. Wash. Apple Advertising Comm'n*, 432 U.S. 333, 343 (1977). Its members Steve Brewer, Joe Pitts, and Vincent Coletti have individual standing, as they have been and will be injured in their use of Missouri lakes that is caused by Missouri's unprotective nutrients WQS and which can be redressed by this Court. *Steger v. Franco*, 228 F.3d 889 (8th Cir. 2000). See Exhibits B, C, and D.

Jackson, 853 F. Supp. 1138, 1165 (N.D. Fla. 2012). According to MDNR, the AQL use is the most sensitive because when MDNR proposed draft criteria to protect DWS, the chl-a levels it proposed were higher in two of the three ecoregions than the proposed AQL limits. Exhibit 23, AR 3157. [14]

However, this does not account for the chl-a criterion in the Plains ecoregion, where most of Missouri's drinking water lakes are located. There, the proposed DWS chl-a criterion region (25 ug/L) was stricter than the AQL criterion (30 ug/L). MDNR dismissed this indication that DWS was the more sensitive use, claiming that the stricter DWS criterion was "similar" to the less strict AQL criterion, and thus close enough. Exhibit 23, AR 3157.

"Close enough" is neither a legal nor a scientific standard and MDNR does not offer support for it. Such an argument also seems to defeat the line-drawing purpose of numeric criteria. At any rate, using MDNR's numbers, it is clear that a lake in the Plains ecoregion could satisfy the 30 ug/L chl-a standard for AQL while exceeding a 25 ug/L chl-a standard that protects a lake for use as drinking water. Missouri has not protected the most sensitive use in this region.

EPA took a slightly different approach in its approval. It argued that the determination of the most sensitive use was not a matter of numeric criteria but requires a holistic look at WQS. Citing *NRDC v. EPA*, 16 F.3d 1395, 1404-05 (4th Cir. 1993), it states that Missouri's pre-existing narrative criteria are sufficient to protect the DWS and recreation uses because the narrative criteria would "provide more stringent controls" than would the AQL numeric criteria. Exhibit 29, AR 4024. EPA reasoned that because Missouri's narrative criteria required waters to be free of "scum, floating surface debris, unsightly color, turbidity and offensive odors," and because those qualities are found in conjunction with cyanobacteria blooms caused by nutrients, waterbodies lacking these qualities should be safe to drink from and recreate in. Exhibit 29, AR 4026.

[14] This contradicts earlier statements from MDNR draft rules. Exhibit 3 at page 1 (describing recreation and DWS uses as "more sensitive").

Leaving aside whether EPA demonstrated that the narrative criteria are or could be more stringent than a 30 ug/L chl-a limitation,[15] EPA's conclusion here represents a repudiation of its earlier final agency action – the 2011 disapproval of Missouri's numeric nutrients standards. Exhibit 1, AR 2977, 3006-08. The CWA requires EPA upon disapproval of a WQS to "specify the changes necessary" to achieve compliance with the Act. EPA did so, writing in detail how MDNR could use EPA's guidance methodology to develop standards that would "protect the designated aquatic life and recreation uses." Exhibit 1, AR 3007. EPA noted that it would "support the state if they chose to modify their criteria beyond the original framework," but did not indicate that EPA would support Missouri if it chose to scale back the framework. Exhibit 1, AR 3007. Nothing about the 2011 disapproval suggested that Missouri would be able to achieve CWA compliance (and avoid EPA's promulgation of its own regulations) by resting on its preexisting narrative criteria to protect one or more uses. In fact, if EPA felt in 2011 that Missouri's uses were already protected by the narrative criteria, why require the state to revise the numeric criteria at all? Exhibit 1, AR 3007 ("state must revise …")

An agency may, of course, change its mind, and may even change its mind for political reasons. However, when it makes this kind of change, the agency has to offer some additional information if the change is not to be deemed arbitrary. *See FCC v. Fox Television Stations, Inc.* 556 U.S. 502, 515 (2009). The agency changing policy or rescinding its regulation must offer a reasoned analysis for the change "beyond that which may be requested when an agency does not act in the first instance." *Fox Television,* 556 U.S. at 514. At the very least, the agency must display awareness of the change and offer good reasons for the new policy or standard. *Id.*

[15] It did not. The *NRDC* court found that "EPA conducted an extensive review of the states" criteria to protect human health, aquatic life, and wildlife." *Id.* at 1405. It also found that the narrative criteria would be implemented through permitting requirements *Id.* Neither of those is true here. EPA devotes a paragraph in its approval to a discussion of the narrative criteria which is not significantly more detailed than MCE's description above, and EPA offered no indication that Missouri had been or would be implementing the narrative criteria in permits to impose DWS restrictions more stringent than 30 ug/L.

An agency faces a higher burden of justification when it reaches diametrically opposite conclusions based on the same facts. *Id.* For example, in *Organized Village of Kake v. USDA*, 795 F.3d 956 (9th Cir. 2015), the agency in 2001 found, based on an extensive factual record, that any economic benefit that might accrue by exempting the Tongass Forest from the Roadless Rule was outweighed by "the long-term ecological benefits to the nation of conserving these inventoried roadless areas …." Two years later, looking at the same facts, the agency found that "the social and economic hardships to Southeast Alaska outweigh the potential long-term ecological benefits." *Village of Kake*, 795 F.3d at 967. While the agency could make such a change with a new administration, it had to offer a reason for rejecting the factual findings it had made earlier. Simply saying that the new administration valued socioeconomic benefits more than conservation benefits was not enough. *Id.* at 968; *Western Watersheds Project v. Bernhardt*, 428 F. Supp. 3d 327, at *12-16 (D. Or. Dec. 20, 2019) (renewal of grazing permit formerly denied to felons insufficiently supported despite presidential pardon); *Indigenous Environmental Network v. U.S. Dep't of State*, 377 F. Supp. 3d 561, 583-584 (D. Mont. 2018) (change from disapproval to approval of pipeline route insufficiently justified as policy change).

In its 2018 discussion of the effectiveness of Missouri's narrative criteria, EPA does not acknowledge its 2011 disapproval of the previous criteria. It treats MDNR's decision to forego the development of recreation and DWS criteria as if it were made on a blank slate, instead of in the shadow of a previous attempt to generate numeric nutrients criteria.

EPA also claimed that Missouri's lack of sufficient microcystin data justifies its decision to allow Missouri to rest on its narrative standards to protect its recreation and DWS uses. Exhibit 29, AR at 4025. However, Missouri had even less data in 2011 when EPA directed the state to redo its numeric criteria. And, despite the supposed lack of microcystin data, EPA's August 2017 draft Notice of Proposed Rulemaking did contain suggested criteria (TN and TP) to protect the drinking water supply

and recreation, derived using the EPA-recommended stressor-response model. Exhibit 14, AR 1245.[16] The supposed lack of data was not a barrier in 2011 or 2017. It will always be possible to gather more data, but in the meantime, the lakes are left unprotected. Under these circumstances, EPA's approval was arbitrary.

II. THE COMBINED CRITERIA FRAMEWORK IS INSUFFICIENT TO PROTECT THE DESIGNATED USE.

MCE believes that Missouri's and EPA's methodological choices were constrained by the 2011 Decision Document. Given that MDNR's previous attempt at a novel methodology had failed, it was reasonable for EPA to limit MDNR's choices in this fashion. But assuming that the 2011 disapproval left Missouri free to try another novel methodology, EPA regulations allow for a state's use of a novel method as long as it is scientifically defensible and protects the use. 40 CFR § 131.11(b)(1)(iii).

MDNR initially followed the instructions in the 2011 Document and was able to generate a set of draft criteria for DWS, recreation, and aquatic life, although it did not take any of the administrative steps necessary to make them a valid WQS rule. Exhibit 3, at p.17. When it appeared that MCE planned to sue EPA to compel it to enact numeric nutrients criteria, and that some form of nutrient criteria would be forthcoming, Missouri abandoned the EPA approach in favor of a framework that made it significantly harder to find that a waterbody is not meeting its use. Missouri's WQS accomplished this in two ways: (1) by use of the "sport-fish" method to establish eutrophic baseline conditions (discussed below in Section III) and (2) by use of a combined criteria framework.

Combined criteria as defined by EPA materials involve the use of at least two parameters to determine when a designated use is not being met. EPA 2013 at 1. For nutrients, this usually means that in addition to deriving a numeric criterion for one of the pollutants itself – nitrogen and phosphorus – the

[16] It also found that recreation and DWS uses would be protected by the criteria EPA was proposing to meet the AQL use, but the DWS standards did not include a chl-a criterion for comparison purposes. Exhibit 14, AR 1245.

state also derives another criterion based on a response variable, like chlorophyll-a. EPA 2013 at 1.

Missouri originally claimed that it based its combined criteria on materials generated through an EPA-sponsored expert workshop on nutrients in streams. Exhibit 4, AR 3072. But, in the final version, MDNR turns to what it calls "bioconfirmation guiding principles," which appears to be the same four-page guidance document used by EPA in its evaluation of the Missouri WQS. Exhibit 23, AR 3181; Exhibit 29, AR 4037-39. [17] Missouri also claimed that its combined criteria approach was similar to approaches used by other states. Exhibit 23, AR 3181. However, Missouri's combined criteria framework does not follow EPA's guidance and is different and less protective than the states to which it compares itself. Despite these failings, EPA nonetheless approved the framework.

A. EPA Approved Missouri's Combined Criteria that will Require Restoration Instead of Protecting the Use.

Introducing any response variable into a nutrient criterion will necessarily incorporate some lag time between pollution and impairment when compared with a causal variable only. Because of this built-in lag, the EPA 2013 guidance cautions that when a state enacts combined criteria, it must ensure that the numbers are "set at levels that protect uses (i.e., before adverse conditions that will require restoration)." EPA 2013 at 2. This statement is at odds with MDNR's expressed description of its purpose in using combined criteria. MDNR *wanted* to focus on restoring impaired lakes rather than focusing on preventing lakes from becoming impaired in the first place. Exhibit 4, AR 3080. And indeed, Missouri's nutrients WQS are reactive rather than forward-looking. In its May 2016 letter explaining why Missouri's nutrients proposal was not approvable, EPA observed that Missouri's proposed screening values "focus on the identification of waters already requiring restoration and would do little to protect designated uses." Exhibit 6, AR 4778.

[17] US EPA, Guiding Principles on an Optional Approach for Developing and Implementing a Numeric Nutrient criterion that Integrates Causal and Response Parameters. EPA-B20-F-13-039 (Sept. 2013) ("EPA 2013 guidance"). Available at https://www.epa.gov/sites/production/files/2013-09/documents/guiding-principles.pdf.

Several factors work together to make Missouri's criteria unprotective of the designated uses. First, Missouri has made chl-a one of its screening values. If a lake exceeds all three screening values (two causal, one response), it is still not considered impaired, unless one of the five weight-of-evidence factors is also present that year. This makes Missouri's WQS unlike the other states that employ combined numeric criteria. In Minnesota, for example, a lake is not meeting its designated use of aquatic life and recreation when exceeds the causal parameter (TP) while at the same time exceeding one of four response indicators, all of which are numeric values. Exhibit 30, AR 118. Vermont's lake nutrients criteria similarly use a causal criterion (TP) and four response indicators. Impairment of the aquatic life use occurs in Vermont if the TP concentration is exceeded or if one of the four response conditions is exceeded. Vermont Water Quality Standards, Environmental Protection Rule § 29A-306, Table 2.[18] Exhibit 31, AR 110-11.[19]

In addition, if a Missouri lake exceeds the chl-a screening value, it is not considered impaired, unless another response variable – one of the weight-of-evidence factors – also occurs in the same year. The EPA 2013 guidance does not anticipate that a state would combine two response variables and no causal variables, as it was designed for states that "wish to rely on response parameters to indicate that a designated use is protected even though a nitrogen and/or phosphorus level is at/above an adopted threshold." EPA 2013 at 1. Missouri's criteria do not measure up in this way as well.

In the 2018 Decision Document, EPA acknowledges that this framework is "problematic" and "contrary to long standing science," as the second response variable might never be exceeded. Exhibit 28, AR 4039. EPA states that t Missouri has addressed the issue by having a hard chl-a criterion

[18] It might seem at first glance as though the response parameter "aquatic biota" is not numeric, but other code sections suggest it is. Vermont Water Quality Standards Environmental Protection Rule Chapter 29A-305(a) and Appendix G suggest otherwise. See also Exhibit 31, AR 113 (describing quality of Vermont's bioassesment program).

[19] Missouri and EPA both mention Virginia's WQS. In Virginia, the lake nutrients standards use chl-a as the primary factor. TP is only applied to lakes that have received chemical treatment for algae,and not much like Missouri's framework at all. At any rate, when TP is used, it is treated independently from chl-a.

(Response Impairment Threshold) which will eventually trigger a finding of impairment as the chl-a rate continues to climb. *Id.* While having the criterion serve as the upper bound for chl-a may prevent a situation where chl-a levels climb to astronomic heights before a second response variable appears, the framework still allows the water to become worse until it is definitely impaired, undermining the reason for the screening values in the first place.[20] This is also exactly the situation the EPA 2013 guidance warns against – allowing the adverse conditions to reach a level that restoration is necessary. EPA does not address this factor.

The weight-of-evidence factors (Response Assessment Endpoints) also demonstrate Missouri's focus on restoration of clearly impaired waters, rather than the prevention of adverse effects. The first factor requires the observable death or serious illness of a mass of aquatic life before finding that the aquatic life is not protected. Although dead fish are surely a sign that aquatic life is not met, fish kills are the kind of "adverse condition requiring restoration" that the 2013 EPA guidance cautions states to avoid. Factor 4, "[o]bserved shifts in aquatic diversity attributed to eutrophication," also requires some forms of aquatic life to diminish in number before impairment will be said to occur. Both factors require restoration of water quality to protect the aquatic life remaining.

MCE acknowledges that the EPA 2013 guidance was not the product of notice-and-comment rulemaking and is not binding. However, [a]gencies are under an obligation to follow their own regulations, procedures, and precedents, or provide a rational explanation for their departure. *Utahns for Better Transp. v. U.S. Dep't of Transp.*, 305 F.3d 1152, 1165 (10th Cir. 2002), *as modified on reh'g*, 319 F.3d 1207 (10th Cir. 2003). An agency's failure to follow its guidance without a reasonable explanation has failed to engage in reasoned rulemaking and has acted arbitrarily. *Town of Barnstable, Mass. v.*

[20] In another section of the 2018 Decision Document, EPA responds to commenters who pointed out that the criteria were reactive. Exhibit 29, AR 4046-47. EPA's response here is to declare the problem resolved through Missouri's Implementation Plan. For a discussion of that aspect of Missouri's nutrients WQS, see below.

F.A.A., 659 F.3d 28, 34-36 (D.C. Cir. 2011); see also *Nat'l Mitigation Banking Ass'n v. U.S. Army Corps of Engineers*, No. 06-CV-2820, 2007 WL 495245 (N.D. Ill. Feb. 14, 2007) (agency's "noncompliance with its own guidance can be a basis to find its actions arbitrary and capricious.").

EPA's approval must offer an explanation for the state's divergence from the guidance and for its own decision to disregard it when evaluating the criteria. EPA does not address the restoration issue, except to assert that the existence of a chl-a cap resolves the problem. It does not, and EPA's decision to approve Missouri's framework is arbitrary and capricious.

B. The Implementation Plan is Not a WQS and Cannot Be Used to Amend the Missouri Criteria into Compliance.

The EPA 2013 Guidance also states that "all causal and response parameters should be expressed numerically." EPA 2013 at ¶ C.2. Three of Missouri's five weight-of-evidence factors are not numeric. They are: 1) occurrence of eutrophication-related mortality or morbidity events for fish and other aquatic organisms; … 4) observed shifts in aquatic diversity attributed to eutrophication; and 5) excessive levels of mineral turbidity that consistently limit algal productivity during the period May 1 – September 30. 10 CSR 20-7.031(5)(N) 6.A, D, E.

Although the weight-of-evidence factors are not numeric, EPA nonetheless approved them, finding that they were "sufficiently numeric," at least as amended. Exhibit 29, AR 4037, 4046. It wrote: "Each of MDNR's Response Assessment Endpoints [is] quantitative in some respect if the further articulation in MDNR's Implementation Plan is considered, except for the observed shifts in aquatic diversity …" Exhibit 29, AR 4037. Without the Implementation Plan, they are not numeric and thus not approvable.

The Implementation Plan was created by MDNR and members of the regulated community at EPA's behest after Missouri had submitted its criteria to EPA for review. Exhibit 27, AR 2624; Exhibit 28, AR 4709. The Plan is not a WQS, as it was not adopted following Missouri's legal procedures for

revising or adopting standards. See 40 CFR § 131.5 (a)(6), § 131.6(e).[21] It represents a promise, not a regulatory requirement, and EPA's reliance on it was contrary to its own regulations and to the requirements of the CWA.

In *Kentucky Waterways Alliance v. Johnson*, 540 F.3d 466 (6th Cir. 2008), EPA had reviewed Kentucky's WQS under CWA § 1313(c). Kentucky's enacted anti-degradation regulations exempted coal-mining permits from undergoing "socioeconomic review" before a discharge would be permitted, in contravention of 40 CFR § 131.12(a)(2). Finding that the regulations as written were not approvable, EPA asked Kentucky for additional information. Kentucky responded with a letter indicating that it would subject coal-mining permits to socioeconomic review. In reliance on the letter, EPA approved the standards.

The Sixth Circuit set aside EPA's approval, giving several reasons for its decision. First, it found that EPA's acceptance of an informal commitment which changed the unambiguous meaning of the rule "effectively rewr[ote] or amended existing state regulations," which EPA may not do. *Id.* at 494. Second, the informal nature of the commitment negatively impacted enforcement of the regulation. *Id.* Finally, EPA may not "escape the notice and comment requirements … by labeling a major substantive legal addition to a rule a mere interpretation." *Id.* As the court explained, EPA's use of an "informal commitment from a state agency rather than requiring the state to amend its regulations violates the federal approval procedure established by 33 U.S.C. § 1313(c)(3) …" That is precisely what EPA has done here – obtained an informal commitment from MDNR and used that to change the weight-of-evidence factors from narrative to numeric.

EPA may argue that the Implementation Plan merely clarified "ambiguous state regulations." It is true that EPA may obtain an authorized state representation about how the state plans to interpret its

[21] MDNR's rulemaking procedures can be found in R.S. Mo. § 640.015, § 536.021, § 644.036, and § 644.026(7).

regulations when only clarification is sought. So in *Defenders of Wildlife v. EPA*, 415 F.3d 1121 (10th Cir. 2005), EPA reviewed a regulation that exempted exceedances of certain water quality characteristics from numeric limits established by state WQS if the exceedances resulted from reasonable operation of irrigation and flood control structures. *Id.* at 1125. It was unclear whether the exemption merely precluded enforcement actions or whether it meant that the state would no longer use the numeric standards.

But this is not a case where regulations are ambiguous – capable of being interpreted as either consistent with or inconsistent with the CWA. The non-numeric criteria in the WQS are clearly not consistent with the CWA guidance as they are written. Instead, this is a case where the Implementation Plan changed non-numeric concepts like "excessive" and "mortality events … for fish and other aquatic organisms" and gave them a numeric component by, among other things, specifying the number of fish required to die and developing a scale to quantify the term "excessive." Exhibit 29, AR 4036-37. EPA ignored its own guidance requiring that combined criteria be numeric and its attempt to have Missouri rewrite the regulation informally is not valid. This action was also arbitrary and capricious.

III. MISSOURI'S NUTRIENTS STANDARDS ARE TAILORED TO PROTECT CERTAIN SPORT FISH, NOT A WIDE VARIETY OF BIOTA

EPA found that Missouri's lake nutrients criteria (Response Impairment Thresholds) protect Missouri's AQL use. Exhibit 29, AR 4028. The AQL use is the implementation of the CWA's "fishable" use: "water quality which provides for the protection and propagation of fish, shellfish, and wildlife." 33 U.S.C. § 1251(a)(2). Missouri specifically defines the AQL use as "waters in which naturally occurring water quality and habitat conditions allow the maintenance of a wide variety of [warm, cool, or cold-water] biota." 10 CSR 20-7.031(1)(C)1.(A)(V), (B)(V), (C)(V).

In adopting its lake nutrients standards, MDNR considered "the health of the recreational fishery as an indicator of the reservoir's suitability for aquatic life." Exhibit 23, AR 3160. In particular, it

considered the health of a portion of the recreational fishery – large-mouth bass, black crappie, catfish, and bluegill – to be the indicator.[22] These fish flourish in an aquatic environment which is described as "eutrophic," meaning that it contains a higher concentration of chl-a in the water, between 18 and 40 ug/L.[23] This link between the sport fish Missouri wants to protect and an eutrophic level of chl-a is confirmed by numerous studies, cited by both MDNR and EPA in support. Exhibit 23, AR 3173-78; Exhibit 29, AR 4029-4031. Further, because the favored sport fish peak in productivity at a level of approximately 36 ug/l chl-a (roughly 100 ug/L TP), MDNR used that as the basis for its chl-a criterion in the Plains region, picking a level slightly below the peak (30 ug/L).

But when it comes to demonstrating a "wide variety of biota" will also flourish in this type of eutrophic environment, the record is not at all clear. Missouri argues that because the sport fish it protects are "apex predators," it necessarily means that if the apex predators are healthy and productive, then the rest of the food web must also be healthy, as the apex predators rely on these other organisms as their source of food, directly and indirectly. Exhibit 23, AR 3178. Exhibit 29, AR 4028. MDNR does not refer to any articles or data supporting this claim and appears to take it as axiomatic. *Id.*, AR 3178.

The articles cited by MDNR (and by EPA in its 2018 Decision Document) do not support this conclusion. MDNR acknowledges that the link between productivity and species diversity is "controversial" and inconsistent. *Id.*, AR 3174. The studies are all over the map; some showing a positive link between the growth of prey fish with increasing levels of nutrients, some showing a negative link, and some showing no connection at all. The most accurate assessment of the cited literature would be that there is no clear relationship between the growth/productivity /health of the apex

[22] It does not include striped bass, hybrid striped bass, walleye, muskellunge, northern pike, smallmouth bass, and rainbow trout all of which are important to Missouri's recreational fishing business and many of which Missouri stocks in its lakes. Exhibit 41, AR 6228; Exhibit 29, AR 4032 n.10. It also does not include benthivores like carp which are less attractive to anglers.

[23] Exhibit 23, AR 3165; Exhibit 29, AR 4030. The remaining categories are oligotrophic (low levels), mesotrophic (between eutrophic and oligotrophic), eutrophic and hypereutrophic. (very high levels).

predator sport fish that Missouri's chl-a criterion protects and the other organisms in the food web.[24] Because Missouri's criterion rests on the existence of such a relationship to support its argument that a "wide variety of biota" are protected, in the absence of such a relationship, it has failed to prove that its criterion is based on a sound scientific rationale. *Nw. Envtl.. Advocates v. EPA*, 855 F. Supp. 2d 1199, 1217–18 (D. Or. 2012), *order clarified. Nw. Envtl. Advocates v. United States Envtl. Prot. Agency*, No. 3:05-CV-01876-AC, 2012 WL 13195656 (D. Or. May 21, 2012) (setting aside approval of criteria where there was not a connection between historical temperatures and present-day salmon).

EPA's position is a little harder to discern. After citing to, but not discussing in detail, most of the articles on which Missouri's analysis relies, it stops short of endorsing Missouri's "apex predator" theory. It seems to conclude that the evidence of a link between the protected sport fish and other organisms in the food web is inconsistent and that there is no "point on the spectrum of algal growth, measured by chlorophyll-a, where meaningful shifts in populations would occur." *Id.*, AR 4031. Instead, it found that deciding to protect one part of the food web instead of another "is more a matter of preference and judgment than a matter of science." *Id.* Given the "subjective nature of the term 'wide variety,'" it found that Missouri has discretion to establish protections for a specific segment of all biota. *Id.*, AR 4031. EPA concluded that Missouri's criteria established a "general target of sport fish populations and are therefore based on a sound scientific rationale." *Id.*, AR 4035.

Protecting a sliver of the aquatic life population It is at odds with the commands of the CWA itself which speak in terms of protecting fish, shellfish, and wildlife – a broader spectrum of fauna than that examined by Missouri or EPA. Missouri's own rule speaks of protecting a "wide variety of biota," instead of offering MDNR the freedom to pick segment to be especially favored. EPA found the phrase

[24] In the summer of 2018, after Missouri submitted its nutrient WQS, MDNR and MSD created a document purporting to establish this connection and citing new authorities. It provided EPA with the documents, although EPA does not appear to have used them in its Decision Document. See Exhibit 27, AR 2624.

"wide variety" to be "subjective," and thus capable of interpretation, but does not explain how the phrase could be limited to three or four species out of an aquatic life population that ranges from mussels, burrowing mayflies, smaller prey fish, other sport fish like striped bass, and benthivores. *Id.*, AR 4034.

EPA further takes a "no harm, no foul" approach to the sport fish method, finding that however it got there, Missouri ended up in the right place. It observed that Missouri's chl-a criteria are "consistent with similar CWA Section 303(c) approval actions for comparable subsets of lakes in other states." *Id.* EPA specifically mentions Minnesota and Virginia as similar states. *Id.* In fact, the Minnesota criteria are quite different from and more protective than Missouri's. Minnesota establishes numeric nutrient criteria that are in fact numbers. Instead of focusing on one factor (sport fish), Minnesota's criteria are based on a wide variety of factors that Missouri does not consider at all.[25] Minnesota represents what Missouri should have done rather than what it did and it is unclear how EPA equates the two.

This kind of generalized comparison between states without more analysis is not particularly helpful because EPA does not identify in any detail how its approval of these states' criteria support approval of Missouri's criteria. However, a quick look at the chl-a levels approved in other midwestern states in EPA's Technical Support Document for its December 2017 draft rule includes a chart listing the lake nutrient criteria from elsewhere in the Midwest. Exhibit 25, AR 1900, Table 6.6. The table shows enacted chl-a criteria ranging from a low of 3 ug/L in some of Minnesota's ecoregions to a high of 30 ug/L in others.[26] The other states – Kansas, Nebraska, and Oklahoma – range from 4.7 ug/L to 10 ug/L. It would be just as fair to characterize Missouri's Plains region criterion as an outlier, greatly

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[25] "These criteria are ecoregion-based and reflect several considerations, including: regional patterns in lake condition; detailed information from ecoregion reference lakes; background trophic status based on sediment diatom reconstruction of TP; interrelationships among TP, Chl-a, Secchi and nuisance algal bloom frequency; lake morphometry; lake-user perception; and lake ecology (including fishery composition and rooted macrophyte extent and diversity)." Steven Heiskary & Bruce Wilson, *Minnesota's Approach To Lake Nutrient Criteria Development*, 24 Lake and Reservoir Management, 282-83 (2008).

[26] The table incorrectly indicates the highest value is 22 ug/L.

exceeding the criteria from neighboring states.

CONCLUSION

For these reasons, Plaintiff asks the Court to enter judgment in its favor pursuant to Rule 56 of the Federal Rules of Civil Procedure.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing document was filed electronically with the Clerk of the Court using the Electronic Court Filing System, which sends notification of such filing to the Counsel of Record in the above-captioned action.

Date: September 25, 2020

/s/ *Elizabeth Hubertz*
ELIZABETH HUBERTZ